

REMARKS

The Final Office Action of January 5, 2004 has been carefully considered by the Applicants. In view of the above amendments and the following comments, reconsideration of the present application is respectfully requested.

Objection Concerning the Drawings

In the Office Action, the Examiner objected to the drawings because they allegedly failed to show the evidence as described in the specification. Specifically, the Examiner indicated:

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the evidence as described in the specification. Figure 3 is of such poor quality that the Examiner is unable to evaluate the data the Figure is cited as representing. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office Action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

In response thereto, Applicants note that a petition to the U.S. Patent and Trademark Office to accept color photographs was submitted with its August 28, 2003 Response. The Examiner has accepted the Petition, thereby making this drawing rejection moot.

Rejections under 35 U.S.C. § 112 – New Matter

On page 3 of the Office Action, the Examiner stated rejections under 35 U.S.C. § 112 with regard to the terms "preculturing the intact seed," "selecting the seed," "allowing the selected seed to produce a transformed monocotyledonous plant," and "callus" in the claims. In response thereto, applicants wish to bring to the Examiner's attention that these phrases are disclosed in the specification as filed and, as such, the use of such terms cannot constitute the addition of new matter. One skilled in the art would consider that the inventors of the present invention were, in fact, in possession of the invention as of the priority date, based on the specification as filed and the common general knowledge in the art as of the priority date.

The phrase "preculturing the intact seed" is supported on page 11, line 23 to page 12, line 3, and in Example 1.

"Selecting the seed" is supported on page 12, line 24 to page 13, line 2, and in Example 1.

Look to page 13, lines 4-13 and in Example 1 for support for the phrase "allowing the selected seed to produce a transformed monocotyledonous plant."

The phrase "callus" is supported on page 4, lines 11-15, and page 19, line 23 to page 21, line 7.

Rejections under 35 U.S.C. § 112 – second

The Examiner states on page 3, first paragraph, of the Office Action:

Claims 1-9 are rejected under 35 U.S.C. 112-2nd. To the extent that this is a new rejection, it is necessitated by Applicant's amendment.

In claim 1, line 6, "selecting the seed with the DNA of interest" – "with" is ambiguous, because the term can mean either "using" or "containing".

In claim 10, "the callus" lacks antecedent basis.

In claim 14, "a selection marker" is unclear. Is this a chemical? Or some conditional change?

In claim 18, line 3, "a plant regulatory substance" is unclear. Is this a nutritional supplement? Or a plant growth regulator?

In response to the rejection of claim 1, Applicants have amended claim 1 to read "selecting the seed containing the DNA of interest." Applicants believe this amendment renders the rejection moot.

The amendment of claim 10 resolves the issue of "callus" having antecedent basis. Therefore, this rejection is overcome.

Claims 14 and 16 have been amended to replace the recitation of "selection marker" with "drug," thereby clarifying that the selecting step is carried out by including a drug in the growth media, allowing transformed seeds to be selected based on resistance to that drug. Support for this is found in the specification as filed on page 10, lines 1-8. Applicants traverse this rejection.

Applicants have amended claim 18 to replace "plant regulatory substance" with "hormone." This amendment clarifies the nature of the substance which is a plant growth regulator, and is added to the regeneration medium. This amendment finds support in the specification as filed on page 18, line 15 to page 19, line 13 in Example 1. Specifically, hormones, such as kinetin, are added to the redifferentiation medium during regeneration.

Rejections Under 35 U.S.C. § 112 - Enablement

The Examiner has rejected claims 1-19 "under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for the method for a transformation of a rice plant [. . .] is not enabling for a method of transforming any monocot comprising unspecified conditions and temperature conditions, throughout the broad scope of the claims."

In response, Applicants draw the Examiner's attention to the amendments to claim 1, wherein Applicants specify the "intact seed of the rice plant" is precultured "in a medium containing 2,4-D for 1 to 7 days." Applicants believe this amendment is sufficient, in view of the disclosure of the specification as filed and the common

general knowledge as of the priority date, to allow one skilled in the art to carry out the claimed invention. The step of preculturing the intact seed from a rice plant in medium containing 2,4-D for 1 to 7 days is an indispensable feature of the claimed invention. One skilled in the art would recognize by comparing examples 1 and 2 in the specification as filed, that the method of the claimed invention (example 1) differs from the conventional method (example 2) essentially with respect to preculturing the intact seed from a rice plant. It is also believed that one skilled in the art could select other conditions according to the common general knowledge in the art as of the priority date. Specifically, parameters such as media, time duration, light conditions, and temperature could be varied as disclosed in the attached references.

For example, Yukoh et al, 1994, provides discussion relating to optimal media and temperature for the tissue culture of cultivars of japonica rice (see page 278); Raineri et al, 1990, also provide similar information regarding culture of rice embryos (see page 37); Uze et al, 1997, further describe media, time duration and temperature conditions for rice embryos (see page 88); and, Zhang et al, 1995, describe, in detail, light, temperature and time duration conditions for the production of rice plants. Clearly, the conditions required for the successful tissue cultivation of rice were well known in the art as of the priority date of the present application.

As such, by specifying the conditions of preculture in the amended claims, one skilled in the art would easily be able to carry out the claimed invention without undue experimentation.

Considering the above, Applicants believe they have overcome this rejection.



CONCLUSION

Applicants respectfully submit that in view of the above amendments and remarks, the present application is in condition for allowance. Withdrawal of the rejection and issuance of a Notice of Allowance is respectfully requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, she is hereby authorized to telephone Richard M. Klein, at (216) 861-5582.

It is believed that no fee is due in the filing of this Amendment. However, if any fees are required, Examiner is authorized to charge any fees due or credit any overpayments to Deposit Account No. 06-0308.

Respectfully submitted,

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Certificate of Mailing

Under 37 C.F.R. § 1.8, I certify that this Amendment is being

- ☒ deposited with the United States Postal Service as First Class mail, addressed to: MAIL STOP AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.
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Date
April 5, 2004

Signature
Printed Name Lynda S. Kalemba